

**REMARKS**

Claims 1 and 10 are pending in this application. By this Amendment, claim 1 is amended and claim 10 is added. Claims 3-5, 8 and 9 are canceled without prejudice to, or disclaimer of, the subject matter recited therein. Support for the amendments and the new claim can be found, for example, in the specification and the claims as originally filed (see specification, page 4, line 14 - page 5, line 1). No new matter is added.

In view of the foregoing amendments and the following remarks, reconsideration and allowance of the claims are respectfully requested.

**I. REJECTION UNDER 35 U.S.C. §102**

The Office Action rejects claims 1, 3-5, and 8-9 under 35 U.S.C. §102(b) over U.S. Patent No. 6,264,857 to Kreuer et al. ("Kreuer"). By this Amendment, claims 3-5, 8 and 9 are canceled, thus the rejection as to those claims is moot. As to claim 1, Applicants respectfully traverse the rejection.

By this Amendment, claim 1 recites, *inter alia*, " ... a base having a lone electron pair, wherein the base has a structure in which one group is selected from: a hydrocarbon group having three or less carbon atoms; a hydroxyl group-containing hydrocarbon group having three or less in a total number of carbon and oxygen atoms; a carbonyl group; a carboxyl group; an amino group; and imino group; a nitro group; and an amide group, is added to a compound selected from a group consisting of imidazole, pyrazole, triazole, pyridine, pyrazine, pyrimidine and pyridazine, wherein a total number of constitution atoms other than hydrogen included in the entire added group is from one to three." Applicants respectfully assert that Kreuer fails to disclose at least the above features of claim 1.

Instead, Kreuer merely discloses a proton conductor comprising an acid and a non-aqueous amphoteric material, wherein the acid may be p-toluenesulfonic acid, methanesulfonic acid or trifluoromethanesulfonic acid (Kreuer, col. 2, lines 5-10; and lines 63-68). Although

Kreuer discloses adding lower molecular weight groups such as a methyl group, ethyl group, nitro group and/or a carboxyl group to an amphoteric group, such as imidazole, pyrazole or phenylimidazole, Kreuer fails to disclose a base structure in which a group having a total number of constitutional atoms other than hydrogen of from 1-3 is added to a compound selected from the group consisting of: imidazole, pyrazole, triazole, pyridine, pyrazine, pyrimidine and pyridazine, as recited in claim 1 (Kreuer, col. 3, lines 62-col. 4, line 23).

Further, examples 1-4 of Kreuer merely disclose a non-aqueous amphoteric material consisting of either imidazole, benzimidazole or pyrazole (Kreuer, col. 5, lines 10-57). In each of these examples, the non-aqueous amphoteric material of Kreuer either has no substituents or has a substituent with a number of constitutional atoms that is outside of the range of one to three, as recited in claim 1.

It is well settled that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *See* MPEP §2131. Based on the above, Applicants assert that Kreuer fails to disclose an electrolyte material for a fuel cell having a proton conductive system comprising a base with the features of claim 1 as recited above. Instead, Kreuer merely discloses proton conductors comprising an acid and a non-aqueous amphoteric material where the non-aqueous amphoteric material either has no substituents or has a substituent with greater than three constitutional atoms other than hydrogen.

In view of the foregoing, Kreuer fails to disclose, either expressly or inherently, each and every feature of claim 1 and, thus, Kreuer does not anticipate claim 1. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

## **II. NEW CLAIM**

By this Amendment, new claim 10 is presented. New claim 10 depends from claim 1 and, thus, distinguishes over the applied references for at least the reasons discussed above with respect to claim 1, as well as for the additional features it recites.

Kreuer fails to disclose and, likewise, fails to anticipate an electrolyte material for a fuel cell having a proton conductive system comprising a base with the features recited in claim 10. Instead, Kreuer merely discloses proton conductors comprising an acid and a non-aqueous amphoteric material that has either no substituents, or a substituent with greater than three constitutional atoms other than hydrogen.

Second, Example 1 of Applicants' specification discloses a significant improvement in conductivity resulting from Applicants' base structure. More specifically, it was found that a base structure obtained by adding a hydroxyethyl group to pyridine, according to claim 10, had an improvement in conductivity of over 100 times when compared with pyridine alone. (see specification, page 14; Example 1). In view of the foregoing, Kreuer fails to provide reason or rationale for one of ordinary skill in the art to have chosen a base structure recited in claim 10.

Prompt examination and allowance of new claim 10 are respectfully requested.

## **III. CONCLUSION**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:  
Request for Continued Examination

Date: December 18, 2009

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